# 29 Lecture - CS304

## Important Mcqs

1. **Which keyword is used to define an abstract class in C++?**
   a) virtual
   b) abstract
   c) interface
   d) class
   Answer: b) abstract

   **Which of the following is true about abstract classes?**
   a) They can be instantiated
   b) They cannot be inherited
   c) They provide a common interface for derived classes
   d) They do not allow any data members
   Answer: c) They provide a common interface for derived classes

   **Which of the following is true about pure virtual functions?**
   a) They have an implementation in the base class
   b) They can be called from the base class
   c) They must be overridden in the derived class
   d) They cannot be overridden in the derived class
   Answer: c) They must be overridden in the derived class

   **Can an abstract class have concrete (non-virtual) functions?**
   a) Yes
   b) No
   Answer: a) Yes

   **Which of the following is a correct syntax for declaring a pure virtual function?**
   a) virtual void func() const = 0;
   b) pure virtual void func() = 0;
   c) void virtual func() = 0;
   d) void func() const = 0;
   Answer: a) virtual void func() const = 0;

   **Which of the following is a correct way to create an instance of an abstract class?**
   a) Shape s;
   b) Shape* s = new Shape();
   c) Circle c;
   d) None of the above
   Answer: d) None of the above

   **Which of the following is true about abstract classes and interfaces?**
   a) They are the same thing
   b) Interfaces cannot have data members

c) Abstract classes cannot have pure virtual functions
d) None of the above
Answer: b) Interfaces cannot have data members

**Which of the following is an advantage of using abstract classes?**
a) They allow multiple inheritance
b) They allow for runtime polymorphism
c) They provide a mechanism for code reuse
d) They can be instantiated
Answer: c) They provide a mechanism for code reuse

**Which of the following is not an example of an abstract class?**
a) Shape
b) Animal
c) Car
d) Vehicle
Answer: c) Car

**Which of the following statements is true about abstract classes?**
a) All member functions must be pure virtual functions
b) Abstract classes cannot have constructors
c) Abstract classes cannot have concrete functions
d) Abstract classes cannot have data members
Answer: c) Abstract classes cannot have concrete functions